

DIVISION OF FOREST PEST CONTROL



Northeastern Area State & Private Forestry

A-70-4

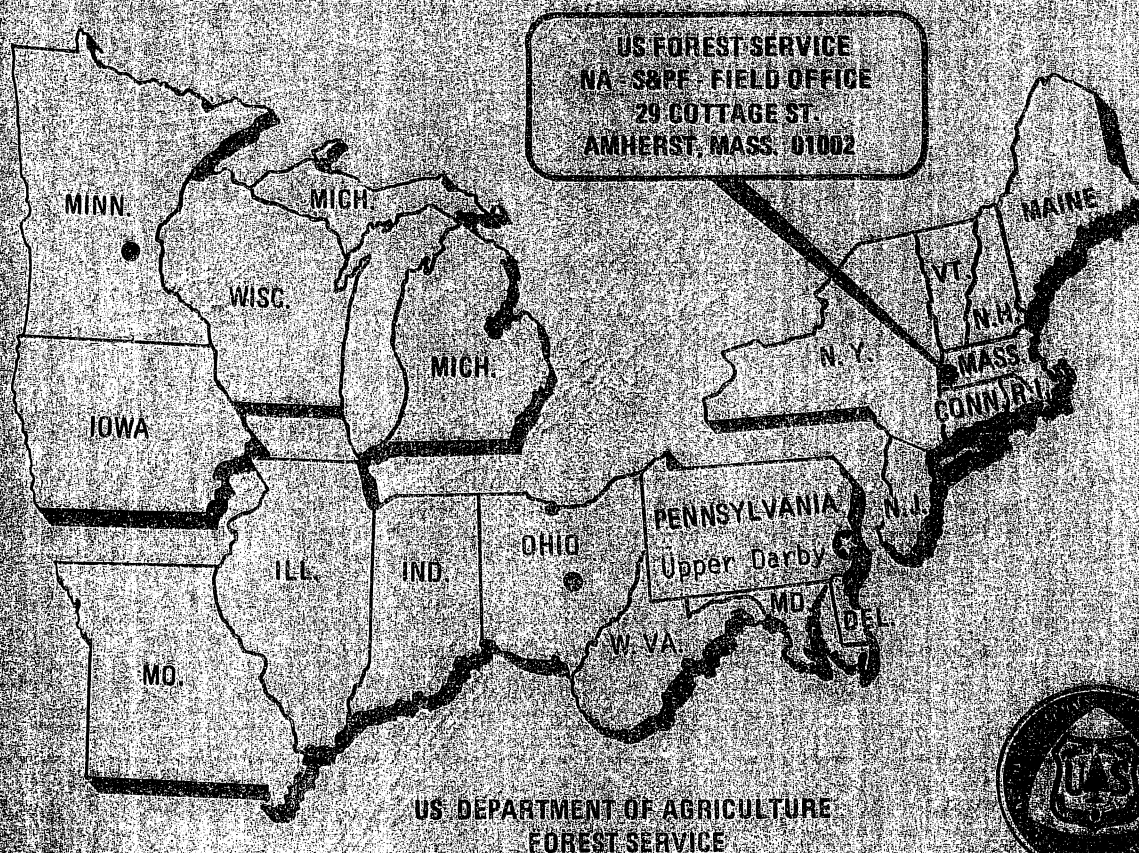
FINAL REPORT

5230

A FIELD TEST OF GUIDELINES DEVELOPED FOR USE IN EVALUATING WHITE PINE WEEVIL DAMAGE OBJECTIVE C, PART IV

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January, 1970



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INTRODUCTION

In 1964 Marty and Mott published a paper entitled "Evaluating and scheduling White-Pine Weevil Control in the Northeast" (4). While this paper was in the process of publication, Bean and Waters developed a plan to test the reliability of the forth-coming tables for predicting the decline of never-weeviled trees (1). The plan included several phases of investigation into the evaluation of weevil damage. Most of the plan has been carried out and has been summarized in various reports of which the most recent is a Progress Report by Ford and Hastings (1968) (3). The present report summarizes the work done in natural stands under provisions of Objective C - Part IV. Work on Objective C - Part III dealing with weevil trends following control treatments is still in progress under the direction of Parker Snowden of the Amherst Field Office. The field work on this will be completed after the 1971 attack season.

METHODS

Every effort was made to follow instructions given in Supplement #2 of the Working Plan (2). State, Federal, and Private personnel were contacted in a search for natural stands of young white pine. Permission was granted by the owners for the establishment of plots in sixty-seven stands.

Weevil damage data were collected as described in the Work Plan Supplement No. 2, and in the Progress Report. The last recorded weevil damage in the plots was recorded after 1968 attacks were evident and prior to 1969 attacks.

Fred Sievers, Marty Calderara, and Van Lilley all of the Amherst Field Office were responsible for the collection of 1968 data. They were assisted by State personnel who had experience with the same plots in previous years.

Copies of completed survey sheets are on file at the Amherst Field Office. A second set was sent to the NEFES at Hamden, Connecticut, for analysis.

RESULTS AND DISCUSSION

Of the 67 original stands selected for the test, 10 had to be abandoned. The remaining, 57 completed stands are distributed as follows:

Maine	21
New York	13
New Hampshire	12
Vermont	5
Massachusetts	1

Stands of white pine that are 2 acres or more, 3 to 10 feet tall, with 300 or more white pine per acre, and with less than 35 large over-story trees are extremely difficult to find in the Northeast. It is debatable whether a great deal of research, survey or control effort in natural stands can be justified because of such scarcity. In my opinion, any stand of natural white pine less than two acres in size is hardly worth managing for timber production and, therefore, would require no weevil prevention or control. A well-stocked stand of white-pine seedlings with a dense overstory of pine or hardwoods may present a different case. The frequency of such stands should be investigated prior to any additional investment in damage surveys.

Future investigations into white-pine weevil damage should be planned so that all plot data could be gathered by a single, permanent team. More than 35 people were involved in field work during the five-year span of this phase - Objective C, IV - of the weevil study. Plots are difficult to maintain over a long period due to land use changes and vandalism. Administrative, travel, and labor costs are vastly increased when a survey is conducted over a period of years. Approximately 375 man-days of federal personnel time, and a like time in state personnel assistance was used in data collection. An additional amount of travel time and per diem increased the cost of the study by \$7,500.

The efforts and cooperation of entomologists and other pest control personnel of the States are greatly appreciated. This tedious and often unpleasant task could not have been completed without their assistance.

RECOMMENDATION

Prompt analysis of the data and construction of weevil damage prediction tables should be conducted by the NEFES.

LITERATURE CITED

- (1) Bean, J. L. and W. E. Waters, 1963. Working plan - a field test of guidelines developed for use in evaluating white-pine weevil damage. Unpublished mimeo. 39 pp.
- (2) _____ and _____. 1966. Supplement 2 of the working plan - a field test of guidelines developed for use in evaluating white-pine weevil damage. Unpublished mimeo. 8 pp.
- (3) Ford, R. P. and A. R. Hastings. 1968. Progress Report on a working plan - a field test of guidelines developed for use in evaluating white-pine weevil damage. Unpublished mimeo, AFO 5230, A-68-9. 6 pp.
- (4) Marty, R. and D. G. Mott. 1964. Evaluating and scheduling white-pine weevil control in the Northeast. USFS Res. Paper NE-19, NEFES.